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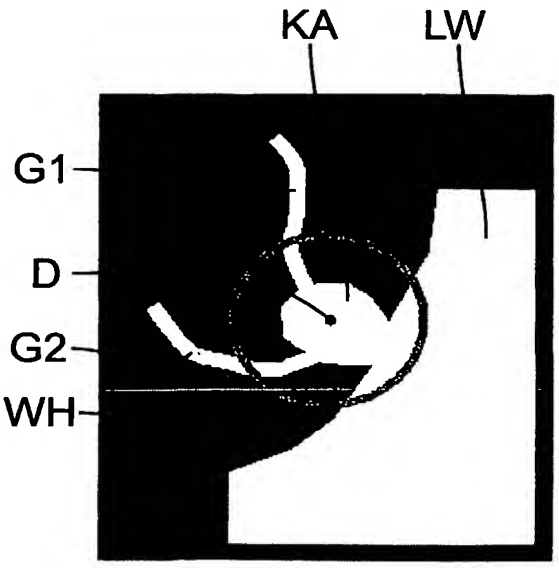
[Continued on next page]

(54) Title: COMPUTER-AIDED DETECTION OF LUNG NODULES



(57) Abstract: The invention relates to a method and a device for forming an image of body structures from an image data set, notably for highlighting potential nodular structures (KI; KA) in a lung. The problem to be solved by the invention is to achieve automatic highlighting of potential nodular structures in methods of this kind. This is realized in that in a plurality of steps a binary data set is formed in which all pixels present in the image data set are subdivided into pixels to be marked and those not to be marked, a first filtering operation being performed in which for each pixel (D) there is determined a distance value which corresponds to the shortest distance between the pixel and the edge (KAG) of the image structure (KA) in which the pixel is situated, those pixels being selected from the binary data set whose distance value is below a predetermined distance limit value, there being performed a second filtering operation in which those previously selected pixels remain selected which are directly neighbored by two pixels having a smaller distance value in both directions of at least one straight line which extends through the pixel, there being performed a third filtering operation in which those previously selected pixels remain selected for which the surrounding pixels, being situated at a distance corresponding to the distance value of the pixel, have a distance value which is a predetermined distance difference value smaller than the distance value of the pixel to be tested itself, the pixels thus selected being used to form an image in which the selected pixels are highlighted.

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A. CLASSIFICATION OF SUBJECT MATTER
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Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SHYH-LIANG LOU ET AL: "Object-based deformation technique for 3D CT lung nodule detection" PROC. SPIE - INT. SOC. OPT. ENG. (USA), PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, 1999, SPIE-INT. SOC. OPT. ENG, USA, vol. 3661, pt.1-2, February 1999 (1999-02), pages 1544-1552, XP002279163 ISSN: 0277-786X cited in the application the whole document	1-14
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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